

REMARKS

Claims 1-51 are pending. Applicants thank the Examiner for noting that Claims 1-14 and 21-50 are allowed. Claims 15-20 and 51 are rejected. Claims 15, 46, and 51 have been amended. No new matter has been added. Applicants respectfully request reconsideration in view of the instant response.

Additionally, Applicants respectfully note that the present Office Action Summary (mailed 3/29/'07) incorrectly characterizes previously cancelled Claims 21-32 as being allowed. Claims 21-32 were cancelled in the January 19, 2007 Amendment in Response to Final Office Action of Sept. 19, 2006. However, the present Office Action Summary indicates that Claims 21-50 are allowed.

Claim 46

Claim 46 has been amended to correct a typographical error. The word “resion” has been replaced with the word “resin”.

CLAIM REJECTIONS35 U.S.C. § 102Claims 15-19, 51

Claims 15-19 and 51 are rejected under 35 U.S.C. §102(a) as being anticipated by Kaza (3002/0129565) (hereinafter, Kaza). The Examiner states that “the recitation that the respective

radiopacity of the impression material and the tray material approximately match each other has not been given patentable weight in the claim because the impression material is not positively claimed". The Examiner is respectfully directed to amended independent Claim 15 which recites that an embodiment of the present invention is directed to a system to create a digital model of a patient's teeth from scanned data of improved quality, comprising:

an impression material;

a dental tray adapted to hold the impression material, the dental tray made of a tray material, each of the impression and tray materials having a respective radiopacity, at least one of the materials being formulated with a radiopaque agent such that the respective radiopacities of the materials approximately match each other;

a radiation source;

a scintillator to receive the radiation from the radiation source;

a radiation detector coupled to the scintillator;

a rotatable table positioned between the radiation source and the scintillator, the table being adapted to support the dental tray with the impression of the patient's teeth; and

a computer coupled to the detector to generate the digital model with scanned data.

(emphasis added). Independent Claims 51 has been similarly amended. Applicants have amended independent Claims 15 and 51 to positively claim the impression material. Applicants respectfully note that the addition of "an impression material" is supported in the specification. For example, page 4, second paragraph states "In another aspect, a dental impression system includes a dental tray containing a radiopaque material adapted to receive a dental impression material thereon.". (Emphasis added)

The use of the impression material is further described in specification, including the following:

The impression tray 10 or 110 and impression material are then introduced into a patient's mouth. An impression is made by the dentist positioning the impression tray and impression material over the patient's teeth and applying pressure so that the impression material disperses around the teeth and dental arch while the dental impression material is curing. To obtain an accurate impression, the impression material must be pushed against the teeth and gums, so that there are no gaps between the teeth and gums and the impression material.

(emphasis added).

Furthermore, Applicants respectfully note that the impression material as claimed may be comprised of a number of components. For example, hydrocolloids and polyethers are one of the major chemical classes of elastomeric impression materials used to take dental impressions. Aginates, examples of hydrocolloids, are "formed by combining the sodium salt of alginic acid, calcium sulfate and water". (Page 12, first paragraph, lines 4-10) Additionally,

Polyethers come as a two part system consisting of base and catalyst pastes. The base contains a polyether with imine end groups and the catalyst contains an aromatic sulfonic acid. These components may be either mixed by hand or dispensed from a dual chambered cartridge that automatically mixes the correct proportions of base and catalyst material.

(Page 12, first paragraph, lines 9-13)

As described, an impression material may be comprised of a number of elements, such as the combination of sodium salt of alginic acid, calcium sulfate and water, and the combination of a polyether with imine end groups and a catalyst containing an aromatic sulfonic acid.

Applicants respectfully submit that Claims 15 and 51 overcome the Examiner's basis for rejection under 35 U.S.C. §102. Since Claims 16-19 depend from allowable Claim 15 and recite further limitations of the claimed invention, applicants respectfully submit that Claims 16-19 overcome the Examiner's basis for rejection under 35 U.S.C. 102 as being dependent on an allowable base claim.

35 U.S.C. §103 Rejection

Claim 20

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaza in view of Coscina (3,878,510) (hereinafter, Coscina). Applicants have reviewed the cited references and respectfully submit that the present invention is not rendered obvious over Kaza in view of Coscina for the following rationale.

Dependent Claim 20 includes the features of that claim upon which it is dependent, Claim 15. Independent Claim 15 is directed to radiopacities of both the tray material and the impression material, and in particular radiopacities of the two materials relative to each other. Applicants have reviewed Kaza and do not understand Kaza to teach the features of radiopacities of the two materials relative to each other. Moreover, the combination of Kaza and Coscina fails to teach or suggest this claim limitation because Coscina does not overcome the shortcomings of Kaza.

**To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art.**

*In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974).

Applicants understand Coscina to teach a set of dental impression trays for both mixed and permanent dentition, wherein the members of the set differ primarily in the size of the dental arch and lateral distance between corresponding molar positions on opposite sides of the jaw. In particular, Applicants respectfully assert that Coscina does not teach, describe, or suggest relating the radiopacities of the dental tray material and the impression material to each other. Therefore, Applicants respectfully assert that Kaza in view of Coscina do not teach, disclose, or suggest the claimed embodiments and overcomes the Examiner's basis for rejection under 35 U.S.C. 103(a).

CONCLUSION

In light of the above-listed remarks and amendments, the Applicants respectfully request allowance of the Claims.

The Examiner is urged to contact Applicants' undersigned representative if the Examiner believes such action would expedite resolution of the present Application.

Respectfully submitted,

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